Aerial Cable Metallic	16	18	20	22
Underground Ca Metal	16	18	25	25
Buried Cable Metallic	16	18	20	23
Fiber Cable	20	20	25	25

Mr. Lee notes that there are states that have ordered the use of the last FCC represcritption for the UNE wholesale rates, including the Department. He also notes that there are also several state commissions that have ordered the use of depreciation factors that are different than the latest FCC prescription. In my direct testimony, I listed several states that have ordered the financial reporting lives recommended by Verizon. The FCC has stated that it does not require that the latest FCC prescription be used. Many states have elected not to use the latest FCC prescription, and either use their own depreciation factors, that are more progressive than the FCC's prior represcription, or use the financial reporting lives of the ILEC. A number of commissions have determined that the financial reporting lives of all telecommunications providers is relevant information and can be used to establish a fair benchmark to set UNE prices. These commissions have ordered the use of the financial reporting depreciation factors as recommended by Verizon MA.

Q. At page 6 of Mr. Lee's testimony, he asserts that the fact that the reserve is growing indicates the FCC rate is adequate, do you concur?

A. No. The mere fact that the reserve is growing does not indicate an adequate rate of

capital recovery. In fact, it is appropriate that the reserve should grow as technology ages. The traditional measure of the adequacy of the reserve, the theoretical reserve, has some shortcomings. Underlying the theoretical reserve calculation is an assumption of uniformity. In an environment faced by the Company 20 years ago, this assumption "worked" – competition was limited, technology change was more controlled, additions and retirements were more stable, and rate of return regulation ensured that any reserve deficiency could be recovered from future customers via an amortization. As Mr. Lee points out on page 4 of his direct testimony, the FCC has not used historical retirement patterns to set depreciation lives since 1980. In recent years, as the network migrates from analog/digital narrow band network to a broadband network, retirements have lagged the retirement ratios implicit in the life estimates. Today's environment introduces an element of change that the uniformity assumption in theoretical reserve calculation does not address. Plant additions and retirements are more variable as the company responds to technology, competitive and regulatory changes. In conclusion, the depreciation live setting model which includes the theoretical calculation of the depreciation reserve as an adequacy measure, was abandoned in 1980, when the FCC prescribed lives shorter than the model predicted.

Q. Should Verizon MA's recommendation for depreciation lives be accepted in this docket?

A. Yes. As previously discussed, Verizon's recommended depreciation lives comply with

the Department's directive that depreciation lives must not exceed the FCC. Verizon's recommendation also complies with the requirement to use forward-looking costs by using depreciation lives that reflect today's telecommunications environment. In contrast, witness Lee recommends a backward-looking retrospective perspective based on the environment in 1996. As shown by the prior chart, even the FCC has been recommending continually shorter lives in recent prescriptions. If anything, the lives recommended by Verizon MA in this docket are very conservative and should be even shorter since Verizon recently revised financial reporting lives shorter in some accounts, as previously illustrated. However, in this docket, Verizon has taken a conservative approach and is recommending the financial reporting lives that were previously in effect. A comparison of the Verizon recommended lives in the chart also illustrates that the recommended lives serve as a viable compromise between the current financial reporting lives and the low end of the FCC range.

Q. Does this conclude your rebuttal testimony?

A. Yes

COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. 01-20 (Part A)

Members of the Panel:

Michael Anglin
Joseph Gansert
John Livecchi
Nancy Matt
Louis Minion

December 17, 2001

REDACTED VERSION

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I. PURPOSE OF THE TESTIMONY

Q. What is the purpose of this testimony?

A. The purpose of this testimony is to respond to criticisms of Verizon Massachusetts ("Verizon MA") cost studies and pricing proposals that were filed by various parties on July 18, 2001.

Q. Who are the members of the Panel submitting this surrebuttal testimony?

A. The members of the Panel are Mr. Michael Anglin, Mr. Joseph Gansert, Mr. John Livecchi, Ms. Nancy Matt and Mr. Louis Minion.

Q. Have these Panel members previously submitted testimony in this proceeding?

A. Yes. Mr. Anglin, Ms. Matt, Mr. Livecchi and Mr. Donald Albert were sponsors of Verizon MA's Initial Panel testimony filed on May 8, 2001. Mr. Minion filed testimony on May 8, 2001 addressing the costs and rates of access to operational support systems (OSS). Mr. Gansert is adopting those portions of the Initial Panel testimony that was sponsored by Mr. Albert. Mr. Gansert also filed Rebuttal testimony on July 18, 2001.

II. SUMMARY OF THE SURREBUTTAL TESTIMONY

Q. Please summarize your Surrebuttal testimony.

A. The criticisms offered by the other parties demonstrate an untenable approach to unbundled network element ("UNE") cost studies. Their criticisms of Verizon MA's engineering assumptions, operational requirements, and technology choices, are unreasonable and contrary to

generally accepted TELRIC costing principles. Moreover, their suggested substitutes for Verizon's assumptions are speculative and unsubstantiated. Our testimony further explains how our adversaries' unsubstantiated assertions fatally undermine their criticisms of Verizon MA's general forward looking cost approach, cost factor assumptions, forward-looking outside plant engineering and structure assumptions, and switching cost assumptions. Indeed, a careful review of the criticisms of Verizon MA's studies reveals that the criticism are simply unfounded and that the Department should adopt Verizon MA's cost studies because they produce accurate and reliable estimates of the forward looking costs of providing UNEs in Massachusetts.

Q. Would you please identify the parties that submitted rebuttal testimony that this panel is addressing within this testimony.

A. This testimony rebuts certain positions taken by Mr. Baranowski and Ms. Pitts, on behalf of AT&T, Mr. Donovan, on behalf of AT&T and WorldCom, Mr. Fischer and Dr. Ankum, on behalf of the CLEC Coalition, Dr. Ford on behalf of Z-Tel, and Mr. Gildea on behalf of the Department of Defense. In separate testimony other Verizon MA witnesses are also rebutting portions of the testimony of the witnesses referred to above.

III. THE PARTIES' CRITICISMS OF VERIZON'S BASIC COSTING AND PRICING APPROACH

A. General Criticisms of Verizon's Cost Studies and Models

Q. On pages 6-8 of his rebuttal testimony, Mr. Baranowski criticizes Verizon's Vcost and LCAM systems on the grounds that they are difficult and cumbersome to work with. Is this a fair and valid criticism?

A. No. Mr. Baranowski offers two general criticisms of Verizon's models. The first relates to problems with the procurement and installation of database software required to run the models. Verizon however recognized early in the proceeding that the software could not be obtained easily through normal purchasing channels. Thus Verizon MA worked with each of the parties to provide the proper software and to assist in its installation. This is no longer an issue as evidenced by the fact that Mr. Baranowski alleges that he re-ran Verizon MA's cost models.

Mr. Baranowski next alleges that he had difficulty evaluating the models because the models do not operate in the same manner as standard commercially available spreadsheet applications. This criticism is unfounded. The fact that the models are more sophisticated and complex than commercially available spreadsheets does not undermine the reasonableness or the reliability of the results produced by the models. Verizon MA's model is designed to estimate the cost of a complex and sophisticated telecommunications network modeled to be capable of providing service throughout the State. Because the design of a telecommunications network is

complex and based upon substantial engineering assumptions, it is only reasonable to expect that a related cost model would be equally sophisticated. Unfortunately, Mr. Baranowski seems to placing a higher value on simplicity than accuracy.

Moreover, Mr. Baranowski's assertions that it is difficult to operate the Verizon models are equally unfounded. Verizon MA provided complete instructions for installing and running the models and worked directly with the parties, when requested; to assist them in running the models. If a user wishes to change a parameter the user may access the appropriate data input table, make the change in the appropriate cell, and re-run the study. Verizon MA also responded to several hundred interrogatories (exclusive of subparts), explaining many of the inputs to the models.

It is clear that Mr. Baranowski's complaints about the difficulty of running the studies are simply a diversion. Mr. Baranowski has previously reviewed the Verizon cost models in several other jurisdictions. More importantly, Mr. Baranowski was able to re-run Verizon MA's cost studies and the results of those re-runs serve as the foundation for his recommendation that the Department establish UNE rates substantially below Verizon MA's forward looking costs to provide UNEs.

Q. On page 7 of his testimony, Mr. Gildea criticizes Verizon's studies on the grounds that they do not rely exclusively on publicly available data. Please respond to this criticism?

A. Mr. Gildea's criticism is without merit. First, the data underlying the Company's studies were made fully available to the Department and all other parties agreeing to sign a reasonable protective agreement. Second, the models submitted by opposing parties also rely, in large part, on proprietary data. More importantly, the Company used the best and most reliable data that it had access to rather than unnecessarily constrain its analysis by the use of inferior data solely because it was "publicly available." Finally, given the substantial number of inputs into the models, only a limited number are proprietary.

B. Determination of Expenses

1. Forward-Looking Conversion Factor (FLC)

Q. Several of the parties have criticized Verizon's use of a FLC factor in its determination of forward-looking annual cost factors ("ACFs"). In particular, Mr. Fischer characterizes the application of a FLC as a "make-whole" provision. Mr. Baranowski calls the FLC a "thinly veiled attempt to recoup its embedded, inefficient operating costs." Are they correct?

A. No. As discussed in our Initial testimony, the use of the FLC is designed to ensure that when the ACFs are applied against the lower investment base contained within the TELRIC studies,[1] the proper amount of *estimated*

[1] In a TELRIC study forward looking investment is generally less than current or historical investment. Thus, the term "lower investment base contained within the TELRIC studies" refers to the fact that the investment base in the Verizon MA TELRIC study is lower than the actual/current investment in the Verizon MA network.

forward-looking expenses are identified. The Annual Cost factors are based upon the relationship of forward-looking expense (the numerator) to investment (the denominator). The factors are developed in the Company's studies by adjusting current expenses to forward looking expenses (*i.e.,* this adjustment is in the numerator). These adjusted expense numerators are then divided by current investments to determine the relationship between forward-looking expenses and current (actual) investment. Because TELRIC studies use forward-looking investments rather than current investments, the application of the FLC is essential to ensure that the proper amount of forward-looking expenses are identified in each of the studies. The FLC does not attempt to recoup or recover current or embedded expenses. Indeed, the FLC is necessary to make certain that the study accurately reflects the relationship of forward-looking expenses to TELRIC investment.

Q. Mr. Fischer presents data that shows the Company's actual Expense to Investment Ratios have been declining over the last eight years. He concludes, based on his analysis of the data, that the application of the FLC is "erroneous." Is his conclusion correct?

A. Although his data and first stage of analysis appear to be correct, his conclusion is wrong. Many of the Company's expense-to-investment ratios *have* shown a decline over the past eight years. Thus, if one were to perform a "current cost" study, rather than a TELRIC study, it would be

appropriate to consider the relationship between actual expenses and actual investment. However, Mr. Fisher's reliance upon a "historical trend" of actual expenses and actual investment misses the key point -- TELRIC studies represent forward-looking, least cost technologies. The application of the FLC does not yield the Company's projected actual expense-to-investment ratio that would be appropriate for a traditional current cost study. The application of the FLC is designed to "correct" for the mismatch resulting from the use of TELRIC investments and actual expense data. The correct way to calculate TELRIC ACFs is to identify the TELRIC expenses and divide by the TELRIC investments. The Company's studies make various adjustments to its expense levels in order to determine TELRIC expenses.

Q. Mr. Baranowski suggests that the discounts implicit in the embedded network may actually be steeper or more aggressive than Verizon's forward-looking discounts. He concludes that as a result the actual FLC may be higher than 80%. Is he correct?

A. No. It is particularly curious that Mr. Baranowski would make such a suggestion, given that AT&T's other witnesses in this proceeding have presented data suggesting a completely different relationship. For example, the HAI model sponsored by AT&T, calculates a total TELRIC investment that is only 32.7% of the booked plant investment in

Massachusetts.[2] While Verizon disagrees with the HAI investment calculations, we would agree that if the HAI investments were accepted, a FLC of 32.7% would be appropriate.

Q. Mr. Fischer criticizes Verizon MA for relying on New York data in estimating the FLC for Massachusetts. He suggests that actual Massachusetts TELRIC investment may be more than 80% of current investment. Similarly, Mr. Baranowski criticizes Verizon for not providing sufficient data. Are their criticisms valid?

A. No. Verizon MA has conducted an analysis of Massachusetts' specific TELRIC investments. This analysis, which is attached to this testimony, demonstrates that Verizon's TELRIC network investments are approximately 65% of the booked network investments in Massachusetts. While this analysis does not include all of the forward-looking TELRIC investments, such as support investments, required for a complete FLC analysis, it certainly demonstrates that Verizon MA's initial estimate of 80% was more than reasonable. The inclusion of any additional support investments required to complete the analysis could not possibly raise the FLC factor to a value approaching, let alone exceeding 80%.

Q. Please respond to the criticism offered by Mr. Fischer and others that the FLC factor calculation does not account for changes in network technology.

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[2] Rebuttal Testimony of Timothy J. Tardiff at 27 (Table 3).

A. Mr. Fischer's argument, which is based on the fact that the forward-looking network will contain more fiber in the local loop plant than the existing network, is incorrect.

First, any adjustment to the FLC calculation would involve more than just a decrease in copper investment and an increase in fiber investment. Other fiber related investments, such as digital circuit electronics, would also increase. The net effect of this adjustment would not be as significant as Mr. Fischer suggests.

Second, Mr. Fischer focuses only on maintenance expenses. Even if Verizon agreed that some adjustment to the FLC calculation could be appropriate to reflect the movement from copper to fiber, such an adjustment would only relate to maintenance expenses. It would not be appropriate to change the FLC calculation as it relates to expenses such as other support, wholesale marketing, and common overhead. While it may be reasonable, for example, to expect certain maintenance expenses to decrease as new fiber is added to the plant, the marketing expenses associated with wholesale products will not be affected by a change in plant technology.

Q. In light of the opposing parties' criticism and the discussion above, is any upward adjustment required to the 80% FLC factor?

A. No. Based on the analysis attached to this testimony, 80% is a conservative estimate of the relationship between the forward-looking

TELRIC investments proposed by Verizon MA and the booked investments. If anything, Verizon MA's 80% estimate may be too conservative. If any adjustment is required to the FLC calculation it should be to decrease the percentage.

Q. Mr. Fischer points out that Verizon did not propose a FLC factor in its 1997 UNE fling and states that "there was no basis to use the FLC factor in 1997 and there is no basis to use it now." Please comment.

A. Whether or not Verizon employed a FLC factor in its 1997 TELRIC filing -- a filing that was made recently after TELRIC was adopted by the FCC and parties were still grappling with its interpretation -- is irrelevant. The Company regularly reviews its cost methods with an eye towards continuing improvement and does not blindly rely on methods from the past. Verizon MA indeed believes today that a FLC should have been applied in the last UNE proceeding.

Q. Dr. Ford suggests at page 11 of his testimony that even if a FLC is appropriate, Verizon has applied the FLC incorrectly. He believes that a Common Overhead ("COH") Factor based on the weighted average FLC should be applied to all expenses. Is he correct?

A. The issue is not as cut and dry as Dr. Ford suggests. A portion of the total expenses included in the COH calculation are nonrecurring expenses. If one assumes that the level of forward-looking nonrecurring expenses remains exactly at the current level, then Dr. Ford's conclusion would be

correct. That assumption, however, is not realistic. No party in this proceeding has suggested that forward-looking nonrecurring expenses will remain at today's levels. In fact, the parties opposing Verizon MA's cost estimates all suggest that nonrecurring expenses should be reduced significantly from today's levels. Dr. Ford's argument should be rejected.

Q. Mr. Baranowski suggests, at page 39 of his testimony that the recommended decision issued in New York by Judge Linsider did not properly focus on all of the issues relative to the FLC factor. Is he correct?

A. No. Mr. Baranowski focuses only on two issues that Judge Linsider apparently did not discuss in his recommended decision: the issue of the forward-looking mix of assets and the discounts implicit in the embedded network. Each of these issues is addressed in this testimony. Furthermore, these issues do not lead to the conclusion that the FLC concept should be rejected. What Mr. Baranowski fails to point out is that Judge Linsider did in fact consider all of the other opposing arguments regarding FLC, and concluded that the FLC is "sound in concept."[3] Judge Linsider observed that "the numerator of Verizon's proposed ACF is forward-looking TELRIC expense, yet the denominator remains historical investment," and then correctly concluded that "the FLC does not convert

[3] New York PSC Case 98-C-1357, Recommended Decision on Module 3 Issues at 44.

TELRIC costs to embedded; it merely tries to restore a 'twice TELRICed' cost calculation to one that recognizes TELRIC only once."[4]

2. Productivity Adjustments

Q. Several of the parties have criticized Verizon's Productivity Adjustment. Specifically, they criticize the lack of a specific adjustment for merger savings, as was done in the recent Verizon New York UNE cost proceeding. Are these criticisms valid?

A. No. The opposing parties fail to acknowledge that in conjunction with the merger savings factor in its recent UNE cost proceeding, in addition to proposing a "merger savings" adjustment, Verizon New York also developed a Special Pension Enhancement ("SPE") factor of 0.049630, filed with the. 015509 "merger savings" adjustment. Stated another way, in order to achieve the merger savings, the Company needs to spend money on restructuring, pension enhancements, and the like. This increased spending serves to offset at least part of the stated merger savings. In this filing, we did not calculate a specific merger savings or restructuring cost adjustment. Rather we included a productivity offset, which includes productivity gains projected from the merger as well as restructuring.

Q. Mr. Gildea bases his criticism on statements made by the Company regarding merger savings in its 1998 Annual Report. Is Mr. Gildea correct?

[4] New York PSC Case 98-C-1357, Recommended Decision on Module 3 Issues at 44.

A. Mr. Gildea is correct that the Company projected merger related expense savings in its Annual Report. However, like other witnesses, Mr. Gildea has failed to discuss merger-related costs. The same Annual Report also projects a significant amount of transition related expenses.[5] Both need to be considered. More importantly, the studies contain a productivity offset that captures the forward-looking type of savings attributable to mergers.

Q. Mr. Fischer recommends, on pages 39 and 40, that Verizon be directed to use a 3.95% annual productivity factor, based on a recommendation of the ALJ in a recent New York proceeding. He compares this factor with what he claims is a 5.76% composite productivity adjustment used by Verizon MA in the present case. Is his recommendation reasonable?

A. No. First of all, Mr. Fischer's comparison is flawed. He relies upon a discovery response provided by Verizon[6] to arrive at the 5.76% composite productivity adjustment. This data only shows the productivity adjustments used to bring 2001 expenses out to 2003. However, the Company's expense factor calculations are based on 1999 expenses, not 2001. If Mr. Fischer were to examine all of the relevant discovery responses provided

[5] Bell Atlantic 1998 Annual Report at 22.

[6] Data Request CC 1-6.

by the Company,[7] he would observe that the composite productivity adjustment used to bring 1999 expenses to 2003 is actually 10.7%.

Q. But Mr. Fischer states that the 3.95% annual adjustment is based on Verizon's own data that shows such a factor is acceptable. Is he correct?

A. He is correct that the 3.95% value is based on Verizon's own data. Where he is incorrect is that Verizon believes the factor is acceptable. As Judge Linsider stated in his Recommended Decision,[8] "the average productivity factor selected by regulators in price cap proceedings implies an annual productivity level of about 3.95%." Mr. Fischer implies in his testimony that Verizon believes this figure to be "acceptable." We certainly do not. The figure is based on productivity adjustments ordered by regulators in price cap cases, and any relationship to realistically achievable, productivity gains would be a mere coincidence.

3. Network Expense Factors

Q. Mr. Fischer states on pages 27 and 28 of his testimony, that there is a "high probability" that Verizon's expense to investment ratios are "further inflated by the inclusion of aged and obsolete equipment." He cites as evidence a discovery response in a recent New York proceeding that

[7] Data Request CC 1-6 and CC1-16.

[8] New York PSC Case 98-C-1357, Recommended Decision on Module 3 Issues at 40.

indicated that Verizon had digital switching plant in service as old as 1968. Please comment.

A. First, Mr. Fischer has not provided any evidence that older digital switching equipment requires significantly more maintenance expenditure than digital switching equipment placed today. Equipment that is obsolete or which requires unduly high maintenance is generally removed and replaced with improved technology when it makes economic sense to do so. Just because something is older and still on the books, doesn't make it trouble-plagued. Second, and more important, is what Mr. Fischer neglects to disclose about the New York data. Although there is digital switching equipment on the New York books that was placed in service in 1968, that investment represents approximately one one-hundredth of one percent (.0001%) of the total digital switching investment in New York. Mr. Fischer also fails to note that all of the digital switching investment placed between 1968 and 1984 represents just over one percent of the total, and that almost seventy-five percent of the digital switching investment currently on the books in New York has been placed in service since 1988. So even if one were to accept Mr. Fischer's theory (which should not be accepted) that older switching equipment requires more maintenance expense, a complete review of the data indicates that the amount of equipment requiring such increased expenses is insignificant.

Q. In a similar claim, Mr. Fischer, on page 24, cites the automobile industry as an example of an industry that has declining maintenance cost trends. Is this analogy appropriate?

A. No. While overall automobile quality and reliability may indeed be better, resulting in a reduction in the number of instances of problems, the increased sophistication of automobiles has likely increased the complexity of solving problems when they do arise, resulting in an increase in the amount of cost for each repair instance. Mr. Fischer's analogy proves nothing.

Q. On page 43 of his testimony, Mr. Baranowski criticizes Verizon's five-percent reduction for copper cable repair expenses, and suggests that the reduction should actually be closer to thirty percent. Is he correct?

A. No. In order to accept a reduction of the magnitude suggested by Mr. Baranowski, one would also have to fully embrace at least two very unrealistic assumptions. First, one would be required to assume that the existing plant consists entirely of old, outdated cable that requires high maintenance. This is not realistic. A large percentage of the existing plant has been placed within the last ten years and does not require significantly more maintenance than newer cables placed today. Second, just because a new cable might require less maintenance today, that cable will not be new forever. As time passes, the newer cables placed today will age and tend to require higher maintenance. A properly calculated TELRIC study

requires that we estimate the expenses over the long run, not just today. Verizon's estimated reduction of five percent, which is based on input from experienced subject matter experts, is reasonable considering all of these factors.

Q. Mr. Fisher, on page 29 of his testimony, recommends that all expenses associated with upgrades be removed from the Network ACFs. Do you agree?

A. No. Just as with Mr. Baranowski's arguments relative to maintenance expenses, Mr. Fischer's recommendations regarding upgrade expenses should be rejected. While it is true that equipment placed in service today will not immediately require upgrades, a forward-looking efficient network will, over time, require continual upgrades to ensure that it continues to be efficient. If we were to follow Mr. Fischer's recommendations we would need to replace, not upgrade, our equipment each time a new improvement is introduced to the technology. That type of continued instantaneous replacement would at least be considered an inefficient use of resources, and would be economically irresponsible.

4. Other Support Factor

Q. Mr. Fischer, on pages 30-32, gives two reasons why he thinks that it is inappropriate to recover a shared cost -- specifically, Other Support expenses -- through an annual cost factor that is applied to investment. Is he correct?